O I P E
JUN 2 3 2004
PATENT & TRADEMARK OFFICE

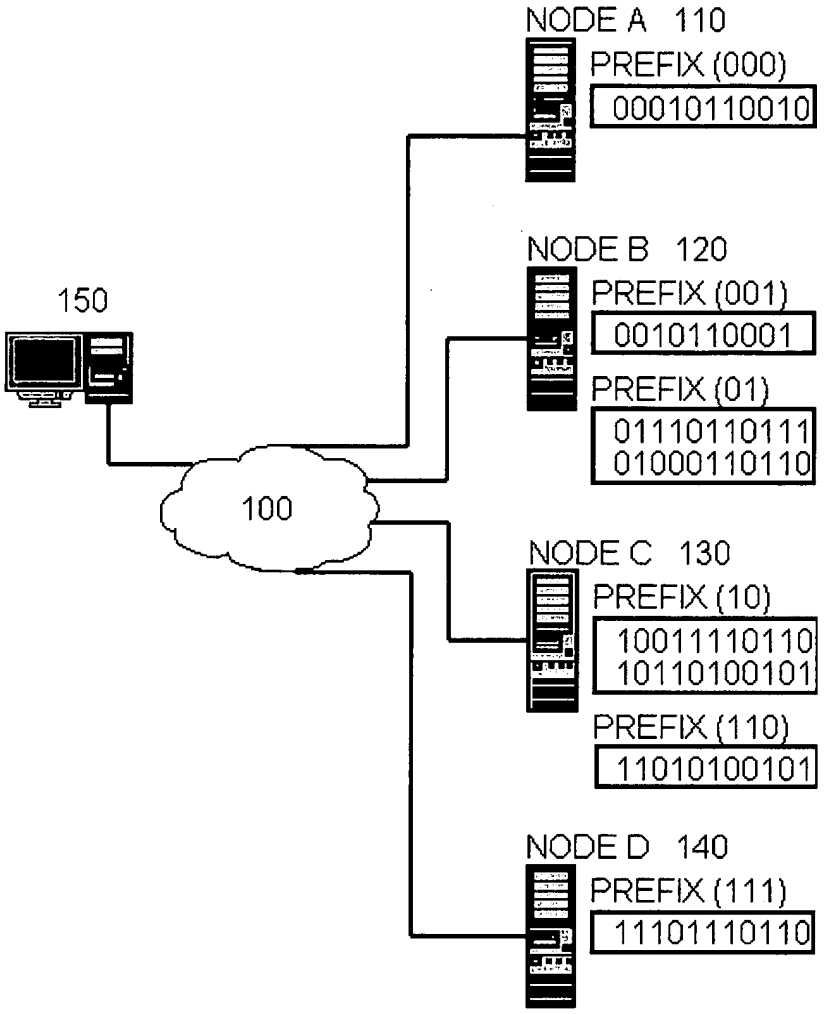

FIG. 1

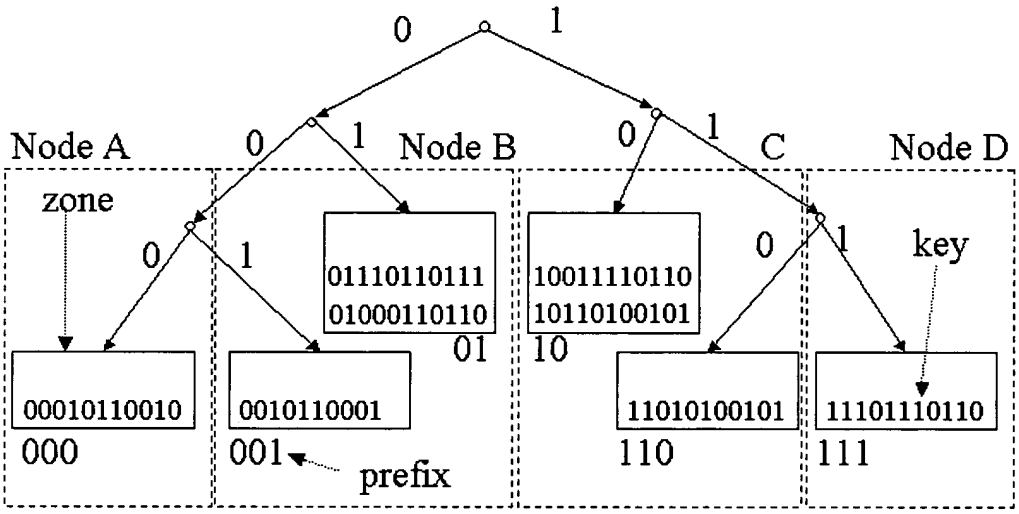
0
1
Node A
0
1
Node B
0
1
C
Node D
zone
0
1
01110110111
01000110110
01
10011110110
10110100101
10
0
1
key
00010110010
000
0010110001
001
prefix
11010100101
110
11101110110
111

FIG. 2

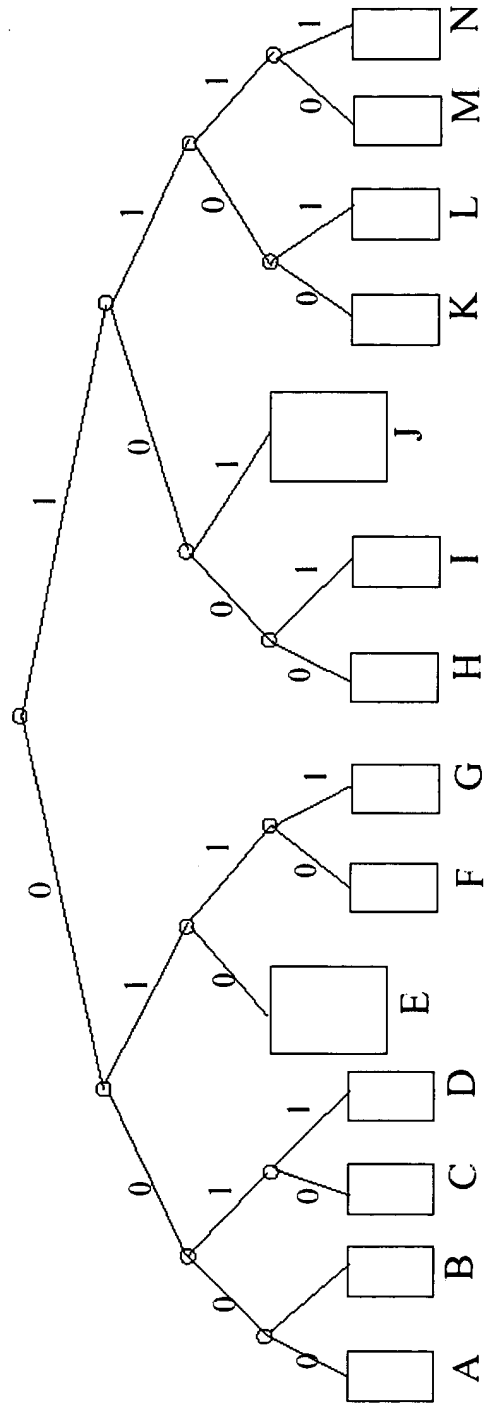

FIG. 3

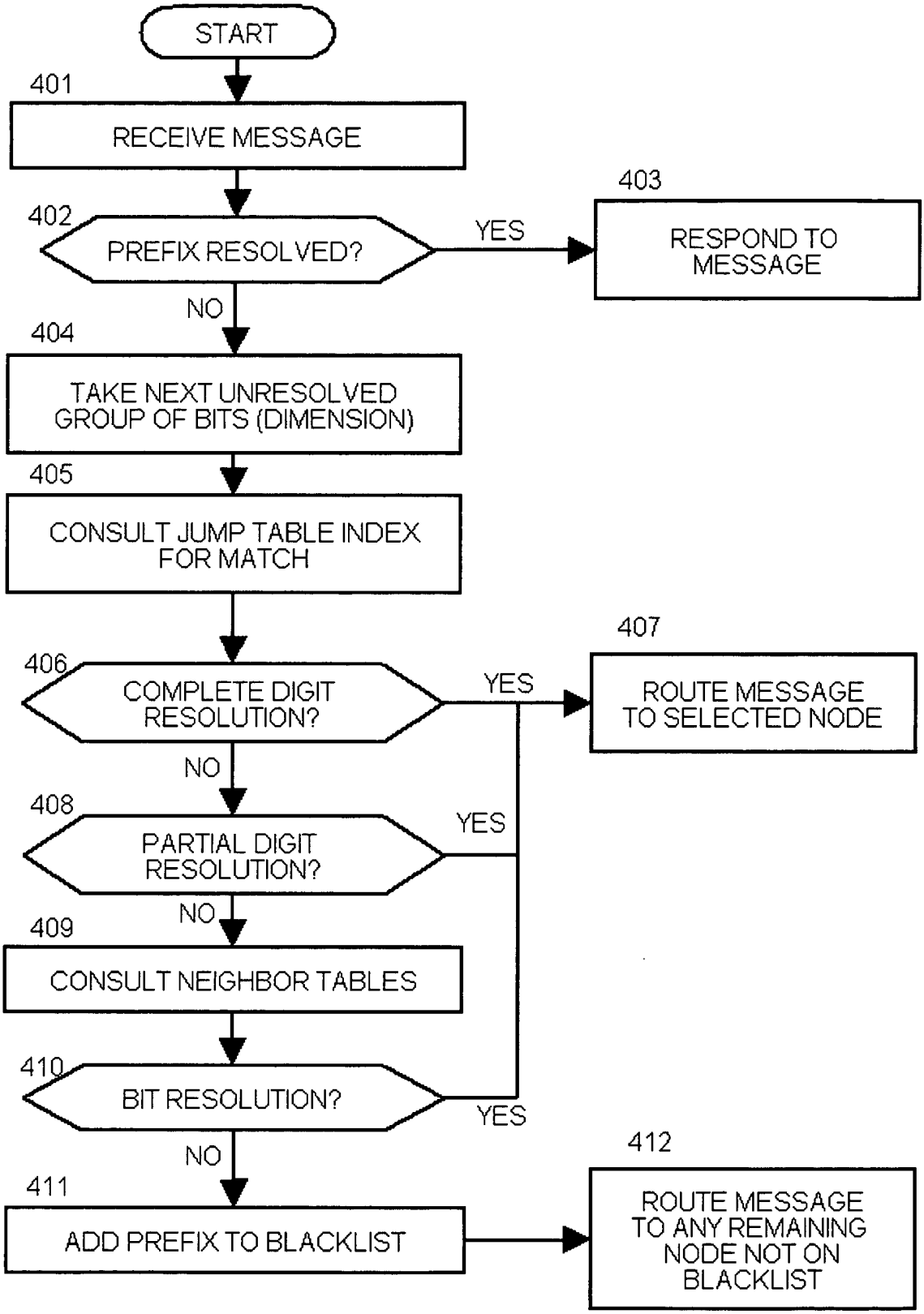
START
401
RECEIVE MESSAGE
402
PREFIX RESOLVED?
YES
403
RESPOND TO MESSAGE
NO
404
TAKE NEXT UNRESOLVED GROUP OF BITS (DIMENSION)
405
CONSULT JUMP TABLE INDEX FOR MATCH
406
COMPLETE DIGIT RESOLUTION?
YES
407
ROUTE MESSAGE TO SELECTED NODE
NO
408
PARTIAL DIGIT RESOLUTION?
YES
NO
409
CONSULT NEIGHBOR TABLES
410
BIT RESOLUTION?
YES
NO
411
ADD PREFIX TO BLACKLIST
412
ROUTE MESSAGE TO ANY REMAINING NODE NOT ON BLACKLIST

FIG. 4

INDEX	PREFIX
0	**00**00 and **00**01 (TWO NODES)
1	**01**0 (THIS NODE)
2	**10**00 and **10**01 (TWO NODES)
3	**11**00 and **11**01 (TWO NODES)

FIG. 5

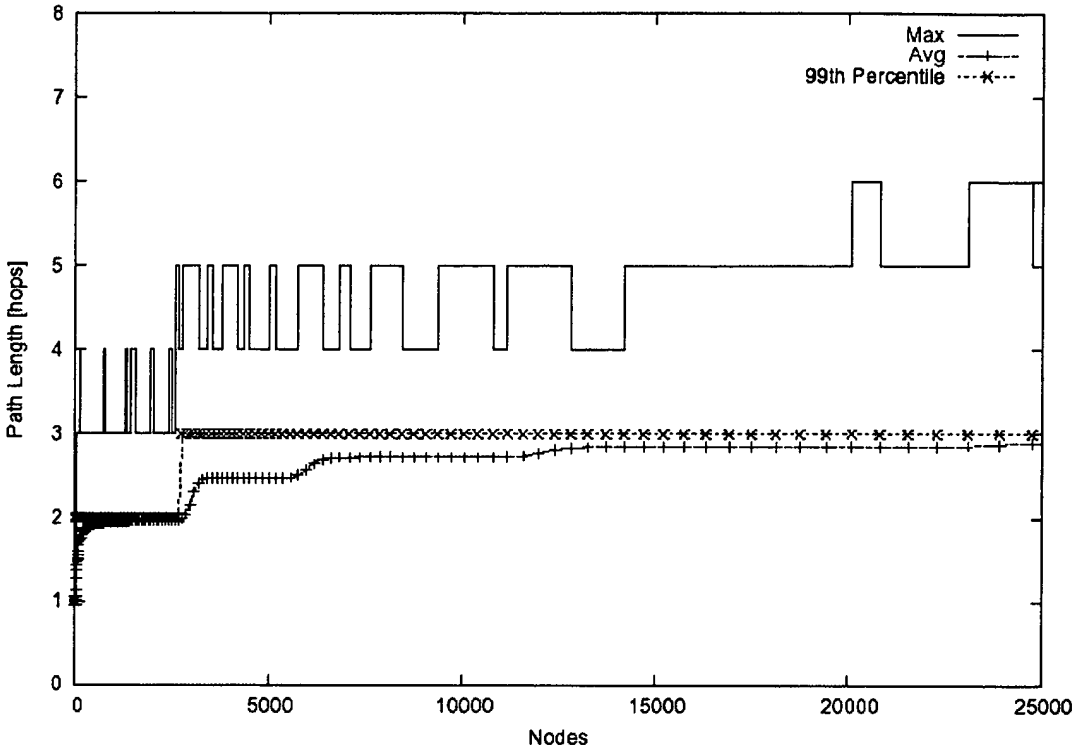
Max
Avg
99th Percentile
Path Length [hops]
Nodes
0
1
2
3
4
5
6
7
8
0
5000
10000
15000
20000
25000

FIG. 6

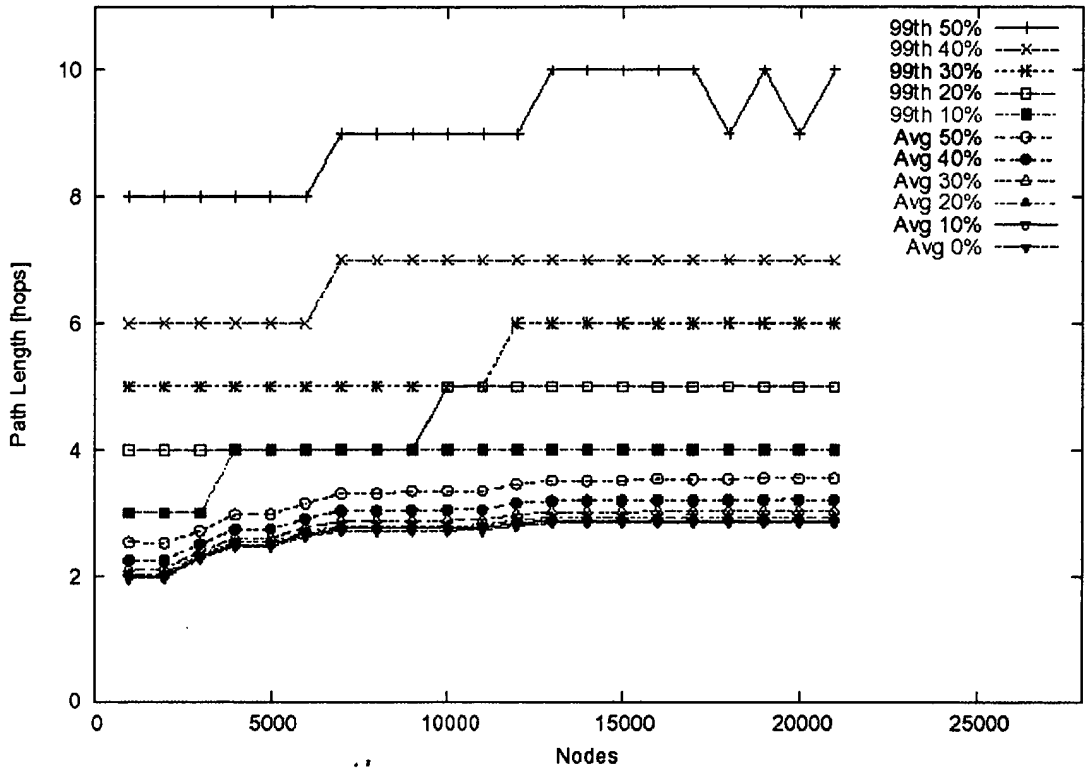
99th 50%
99th 40%
99th 30%
99th 20%
99th 10%
Avg 50%
Avg 40%
Avg 30%
Avg 20%
Avg 10%
Avg 0%
Path Length [hops]
Nodes
0
2
4
6
8
10
0
5000
10000
15000
20000
25000

FIG. 7